# Tropical Forecast - Projected Path - v2.0
# Document Version 1.1

Domain Portfolio: Tropical | Domain: Forecast | Usage Classification: Standard

**Geography:** Global **Attribution Required:** N/A **Attribution Requirements:** N/A

## Overview

The Tropical Forecast - Projected Path API provides the ability to query the single projected path per active storm. Active storm - any storm that has reported in the last 168 hours.
The Tropical Forecast - Projected Path API supports query by Basin, Selected Source, and Storm ID. Note: Storm ID may not be unique and this query may return multiple records.

Note: Storms will only pull from a designated source when calling by stormId.

- **See the common usage and style guide which describes the common elements, error handling, language support, units and terminology used by the Weather Company Data APIs.**
  - **https://ibm.co/APICom**

## HTTP Headers and Data Lifetime - Caching and Expiration

For details on appropriate header values as well as caching and expiration definitions, please see **The Weather Company Data | API Common Usage Guide**.

## Translated Fields:

This TWC API handles the translation of phrases. However, when formatting a request URL a valid language must be passed along (see the language code table for the supported codes).

- storm_type
- storm_sub_type
- storm_dir_cardinal

## URL Construction

| **Atomic API URL Examples:** | **Aggregate Product Name** | **v2tropicalProjectedPath** |
|---|---|---|
| **Request by Source and Basin: Required Parameters:** source, basin, language, format, units, nautical=(true, false)<br>https://api.weather.com/v2/tropical/projectedpath?**source=default**&**basin=all**&language=en-US&format=<json or xml>&units=e&nautical=<true or false>&**apiKey=yourApiKey** | | |
| https://api.weather.com/v2/tropical/projectedpath?source=default&basin=all&language=en-US&format=json&units=e&nautical=true&apiKey=**yourApiKey** | | |
| **Request by Storm ID: Required Parameters:** stormId, language, format, units, nautical=(true, false)<br>https://api.weather.com/v2/tropical/projectedpath?**stormId=EP052016**&language=en-US&format=<json or xml>&units=e&nautical=<true or false>&**apiKey=yourApiKey** | | |
| https://api.weather.com/v2/tropical/projectedpath?stormId=EP052016&language=en-US&format=json&units=e&nautical=true&apiKey=**yourApiKey** | | |

## Nautical Parameter

If nautical=true, then any measurement that could be represented as knots is, regardless of the units parameter. Anything that is not subject to nautical form is left in the requested units (which is why

you see pressures switch back and forth with units even when nautical=true)

| |
|---|
| units=e&nautical=true will give pressures in inches-of-mercury and speeds in knots<br>units=m&nautical=true will give pressures in millibars and speeds in knots<br>units=e&nautical=false will give pressures in inches-of-mercury and speeds in mph<br>units=m&nautical=false will give pressures in millibars and speeds in kph |

### Wind Averaging Period

Governmental organizations providing tropical data use different periods of time when averaging wind values. The United States uses 1 minute values, New Delhi uses 3 minute values and all others use a 10 minute value. This applies to the following fields found in the payload

| |
|---|
| Projected Path : wind_radii |

### Valid Parameters

The valid parameter values listed below are unique to this API and are cases sensitive. These parameters support the ability to 'filter' the request by the supported sources and basins.

| Parameter: source | |
|---|---|
| Valid Parameter Value | Description |
| default | Data returned is limited to a TWC selected source for that basin. As additional sources are added worldwide, the default source for a particular basin may change. |
| all | Data returned for all sources for that basin. |
| Parameter: basin | |
| Valid Parameter Value | Description |
| all | Data returned for all supported basins (listed below). |
| AL | Atlantic Ocean |
| CP | Central Pacific |
| EP | Eastern Pacific Ocean |
| IO | Indian Ocean |

| | |
|---|---|
| SH | Southern Hemisphere |
| WP | Western Pacific |

## Data Elements & Definitions

| Field Name | Description | Type | Range | Sample | Nulls Allowed |
|---|---|---|---|---|---|
| Advisory Info Object | | | | | |
| storm_key | Unique storm identifier through life of the storm | string | | a87e1880a4870ae1b7d21049151d5edfa4e1011e | N |
| storm_id | Storm id. Format will vary by source. Not unique globally | string | | EP022002 | N |
| storm_name | Name assigned by issuing agency. Named storms are in proper case | string | | Alberto | N |
| alternate_storm_name | 'Storm-name' populated in Japanese when data is from JMA. Otherwise will be'null' | string | | null | Y |
| source | Issuing Agency | string | NHC, CPHC, JTWC | NHC | N |
| basin | Basin identifier. | string | AL, CP, EP, IO, SH, WP<br>NHC reports for: AL and EP<br>CPHC report for CP<br>JTWC reports for: EP, CP, IO, SH, WP | EP | N |
| dsgnt_source | true if a TWC selected provider | boolean | True or False | TRUE | N |
| issue_office | Office issuing bulletin | string | | KNHC | N |
| wmo_id | For sources NHC, WPC and JTWC this data field will contain a value | string | | WTPZ34 | Y |
| bulletin_id | Internal use only | string | | a87e1880a4870ae1b7d21049151d5edfa4e1011e | N |
| issue_dt_tm | Time Issuing Agency creates the bulletin | date | ISO 8601 – YYYY-MM-DDTHH:MI:SS±HHMI or Z | 2015-01-13T01:00:00-00:00 | N |
| issue_dt_tm_tz_cd | IANA code for issue_dt_tm | string | | America/New York | N |
| issue_dt_tm_tz_abbrv | Time zone abbreviation for issue_dt_tm | string | | EDT | N |
| process_time_gmt | Time SUN processed bulletin | epoch | | 1421175600 | N |
| adv_num | Issuing Agency advisory number | string | | 12A | Y |
| adv_dt_tm | Advisory time | date | ISO 8601 – YYYY-MM-DDTHH:MI:SS±HHMI or Z | 2015-01-13T10:00:15-08:00 | N |
| adv_dt_tm_tz_cd | IANA code for adv_dt_tm | string | | America/New York | N |
| adv_dt_tm_tz_abbrv | Time zone abbreviation for adv_dt_tm | string | | EDT | N |
| nxt_cmplt_advsry_dt_tm | Anticipated next advisory issue time. Is null if final_advisory = true OR we could not extract next update time | date | ISO 8601 – YYYY-MM-DDTHH:MI:SS±HHMI or Z | 2015-01-13T10:00:00-08:00 | Y |
| nxt_cmplt_advsry_dt_tm_tz_cd | IANA code for nxt_cmplt_advsry_dt_tm | string | | America/New York | Y |
| nxt_cmplt_advsry_dt_tm_tz_abbrv | Time zone abbreviation for nxt_cmplt_advsry_dt_tm | string | | EDT | Y |

| | | | | | |
|---|---|---|---|---|---|
| final_advisory | Indicates the final advisory issued from the primary source. The value only mirrors the indication within an advisory itself that it is the final advisory. However, it is possible that an issuing office may reissue an advisory if the storm moves back into their area of responsibility. | boolean | | true | Y |
| expire_time_gmt | 168 hours past the last advisory time. Suggested removal time. | epoch | | 1421175600 | N |
| Forecast Object | | | | | |
| fcst_hour | Forecast time steps | integer | 12,36,48,72,96 and 120 (Effective 5/15/20 NHC will add a 60 hour forecast object) | 12 | N |
| fcst_dt_tm | Forecast time | date | ISO 8601 – YYYY-MM-DDTHH:MI:SS±HHMI or Z | 2015-01-13T01:00:00-05:00 | N |
| fcst_dt_tm_tz_cd | IANA code | string | | America/New York | N |
| fcst_dt_tm_tz_abbrv | Time zone abbreviation | string | | EDT | N |
| latitude | Forecast latitude of the storm | decimal | | 22.8 | N |
| latitude_hemisphere | Latitude hemisphere | string | | S | N |
| longitude | Forecast longitude of the storm | decimal | | -113.7 | N |
| longitude_hemisphere | Longitude hemisphere | string | | W | N |
| storm_number | Given for only named storms leveraging JMA data. Othewise null | integer | | null | Y |
| storm_type_cd | Encoded storm type | string | TD, TS, HU, SS, PT, RO, SD, EX, LOW, PTC, TY, ST, TC, | HU | N |
| storm_type | Storm type | string | NHC, WPC storm types:<br>Tropical Depression, Tropical Storm, Hurricane, Subtropical Storm, Post-tropical cyclone, Remnants of, Subtropical Depression, Extratropical, Extra Tropical Low, Potential Tropical Cyclone<br><br>JTWC storm types:<br>Typhoon, Super Typhoon, Tropical Cyclone, | Hurricane | N |
| storm_sub_type_cd | Encoded storm sub type | string | 1, 2, 3, 4, 5 | 1 | Y |
| storm_sub_type | Storm sub type | string | Category 1 Hurricane<br>Category 2 Hurricane<br>Category 3 Hurricane<br>Category 4 Hurricane<br>Category 5 Hurricane<br>Category 1 Tropical Cyclone<br>Category 2 Tropical Cyclone<br>Category 3 Tropical Cyclone<br>Category 4 Tropical Cyclone<br>Category 5 Tropical Cyclone<br>Cyclonic Storm<br>Severe Cyclonic Storm<br>Very Severe Cyclonic Storm<br>Extremely Severe Cyclonic Storm<br>Super Cyclonic Storm | Category 5 Hurricane<br><br>Note:<br>In EP, CP, and AL, only storm_type=HU (Hurricane) has a sub_type<br>In WP, no storm_type has a sub_type<br>In IO and SH, storm_type=TC (Tropical Cyclone) has a sub_type. If storm_type=TC in another basin, it will not have a sub_type. | Y |
| suppressed | Suppress the forecast hour ( true or false) | boolean | | true | N |
| max_sustained_wind | Maximum sustained winds | integer | | 45 | N |

| | | | | | |
|---|---|---|---|---|---|
| wind_gust | Wind gust | integer | | 70 | Y |
| Endpoints Object | | | | | |
| endpoint_left_lat | Left forecast cone latitude | decimal | | 55.10 | N |
| endpoint_left_lon | Left forecast cone longitude | decimal | | -47.10 | N |
| endpoint_right_lat | Right forecast cone latitude | decimal | | 57.90 | N |
| endpoint_right_lon | Right forecast cone longitude | decimal | | -47.90 | N |
| Storm Wind Radius Object Values | | | | | |
| radii_wspd | Wind speed for the associated quadrant | integer | | 64 | N |
| NE | Distance from the forecast position of the storm in the NE quadrant where radii_wspd begin | integer | | 75 | N |
| SE | Distance from the forecast position of the storm in the SE quadrant where radii_wspd begin | integer | | 75 | N |
| SW | Distance from the forecast position of the storm in the SW quadrant where radii_wspd begin | integer | | 80 | N |
| NW | Distance from the forecast position of the storm in the NW quadrant where radii_wspd begin | integer | | 80 | N |
| Heading Object - Storm heading information | | | | | |
| storm_dir | Current direction of the storm in degrees | string | | 340 | N |
| storm_dir_cardinal | Cardinal wind direction | string | N, S,E,W, NNE, NE,ENE,ESE, SE, SSE, SSW, SW, WSW, WNW, NW,NNW, Almost Stationary, Stationary, Drifting , Meandering | NNW | N |
| storm_spd | Forward speed of the storm | integer | | 12 | Y |

## JSON Sample

Sample Response


```
{
"metadata": {
"language": "en-US",
"transaction_id": "1465844819313:1669263939",
"version": "2",
"nautical": "true",
"units": "e",
"basin": "all",
"source": "default",
"expire_time_gmt": 1465866420,
"status_code": 200
},
"advisoryinfo": [
{
"bulletin_id": "11CD8A58FBF14D37ABF8AD926E7714B4",
"storm_key": "7EE43DD5A3ED5956652E80BDC0524E8B",
```

```
"storm_id": "AL032016",
“storm_number”: null,
"storm_name": "Colin",
“alternate_storm_name”: null,
"source": "NHC",
"dsgnt_source": true,
"basin": "AL",
"issue_office": "KNHC",
"wmo_id": "WTNT23",
"issue_dt_tm": "2016-06-07T20:19:00Z",
"issue_dt_tm_tz_cd": "Etc/UTC",
"issue_dt_tm_tz_abbrv": "UTC",
"adv_num": "10",
"adv_dt_tm": "2016-06-07T17:00:00-04:00",
"adv_dt_tm_tz_cd": "America/New_York",
"adv_dt_tm_tz_abbrv": "EDT",
"nxt_cmplt_advsry_dt_tm": "2016-06-07T17:00:00-04:00",
"nxt_cmplt_advsry_dt_tm_tz_cd": "America/New_York",
"nxt_cmplt_advsry_dt_tm_tz_abbrv": "EDT",
"final_advisory": true,
"projectedpath": [
{
"fcst_hour": 12,
"fcst_dt_tm": "2016-06-08T02:00:00-04:00",
"fcst_dt_tm_tz_cd": "America/New_York",
"fcst_dt_tm_tz_abbrv": "EDT",
"storm_type_cd": "PT",
"storm_type": "Post-Tropical Cyclone",
"storm_sub_type_cd": null,
"storm_sub_type": null,
"suppressed": false,
"max_sustained_wind": 55,
"wind_gust": 65,
"heading": {
"storm_dir": "66",
"storm_dir_cardinal": "ENE",
"storm_spd": 40
},
"latitude": 39.5,
"latitude_hemisphere": "N",
"longitude": -65.5,
"longitude_hemisphere": "W",
"endpoint_left_lat": 39.96,
"endpoint_left_lon": -65.76,
"endpoint_right_lat": 39.04,
"endpoint_right_lon": -65.24,
"wind_radii": [
{
"radii_wspd": 34,
"NE": 60,
```

"SE": 240,
"SW": 180,
"NW": 60
},
{
"radii_wspd": 50,
"NE": 0,
"SE": 100,
"SW": 0,
"NW": 0
}]},
{}, {}, {}, {}, * Forecast 24, 48, 36, 72 Objects Collapsed For Display Purposes * Effective 5/15/2020 NHC will add a 60 hour forecast object
],
"process_time_gmt": 1465369967,
"expire_time_gmt": 1465938000
},
{} * Additional Bulletin Object Collapsed For Display Purposes
]}